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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,050	06/27/2003	Brent Stone	884.826US1	7913

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EXAMINER	
TRAN, LONG K	

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,050	STONE, BRENT	
	Examiner	Art Unit	
	Long K. Tran	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 3, 6 – 13 and 27 – 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 – 3, 6, 7 and 35 – 37* is/are allowed.

6)☒ Claim(s) *8 – 13, 27 - 30 and 31 – 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. This office action is in response to Amendment filed on June 10, 2005.

2. Claims **4 – 5,** and **14 – 26** have been cancelled.

3. Claims **1, 8** and **27** have been amended.

4. Claims **31 – 37** have been added.

5. Claims **1 – 3, 6 – 13** and **27 – 37** are presented for examination.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims **8 – 13** and **31 – 34** are rejected under 35 U.S.C. 102(b) as being anticipated by Coico et al. (US Patent no. 6,354,844).

Regarding claims **8** and **10**, Coico et al. disclose a printed circuit board 25 and interposer 21 (fig. 1) as a receptacle comprising:

A rigid body 25 having a first surface (fig.1; not labeled);

Non-insertable contacts 27(fig. 1) at a first surface of the receptacle; and

Insertable contacts 35 and 37 (fig. 1) having openings on the first surface and internal conductive structures within the rigid body 25 (Note that the alignment pins 23 and 24 could be inserted into metal-plated openings (holes) 35 and 37 connected to some form of metallurgy and used to carry power or some form of device signal (column 4, lines 16 – 21).

Wherein the non-insertable contacts and the insertable contacts are arranged to make electrical contact with non-insertable features and insertable features of a single electronic circuit package brought in contact with the receptacle (col. 5, lines 1+).

Regarding claim **9**, Coico et al. disclose the receptacle comprises socket (col. 1, line 35) or alignment components including holes 29 with sleeves 33 (col. 5, lines 5 – 15).

Regarding claim **11**, Coico et al. disclose the non-insertable contact includes a land grid array contact (abstract and col. 3, lines 33 – 36).

Regarding claim **12**, Coico et al. disclose the insertable contact includes an alignment component 33 (fig. 1) to receive pin features 23 and 24 (fig. 1; col. 4, lines 22 – 29).

Regarding claim **13**, Coico et al. disclose the insertable contact includes a low insertion force contact (col. 4, lines 55 – 63).

Regarding claims **31** and **33**, Coico et al. disclose a receptacle comprising:

A printed circuit board as a rigid body 25 having a first surface (fig.1; not labeled);

Non-insertable contacts 27(fig. 1) at a first surface of the receptacle; and

Conductive, low insertion force, insertable contacts 35 and 37 (fig. 1; col. 4; lines 55 – 63) having openings on the first surface and internal conductive structures within the rigid body 25 (Note that the alignment pins 23 and 24 could be inserted into metal-plated openings (holes) 35 and 37 connected to some

form of metallurgy and used to carry power or some form of device signal (column 4, lines 16 – 21); and wherein the conductive, low insertion force, insertable contacts 35 and 37 are to provide a vertical insertion force to engage the insertable features 23 and 24 with the receptacle

Wherein the non-insertable contacts 27 and the insertable contacts 35 and 37 are arranged to make electrical contact with non-insertable features 17 and insertable features 23 and 24 of a single electronic circuit package brought in contact with the receptacle (col. 5, lines 1+).

Regarding claim **32**, Coico et al. disclose the receptacle comprises socket (col. 1, line 35) or alignment components including holes 29 with sleeves 33 (col. 5, lines 5 – 15).

Regarding claim **34**, Coico et al. disclose the non-insertable contact includes a land grid array contact (abstract and col. 3, lines 33 – 36).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim **27 – 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Coico et al. (US Patent no. 6,354,844) in view of Rumsey et al. (US Patent Application Publication no. 2003/0193089).

10. Regarding claim **27**, Coico et al. disclose an electronic package 1 (figs 1 & 3) having non-insertable feature 17 (figs 1 & 3) at a first surface of the electronic package and Insertable feature 23 (fig. 1) extending perpendicularly from the first surface;

A receptacle including a printed circuit board 25 and interposer 21 (fig. 1) coupled to the electronic package, and having a rigid body 25 having a first surface (not labeled) and having non-insertable contacts 27 (figs 1 & 3) having contact portions exposed at the first surface of the rigid body 25, and Insertable contacts 35 and 37 (fig. 1) having openings on the first surface and internal conductive structures within the rigid body 25 (Note that the alignment pins 23 and 24 could be inserted into metal-plated openings (holes) 35 and 37 connected to some form of metallurgy and used to carry power or some form of device signal (column 4, lines 16 – 21). wherein when the electronic circuit package is joined with the receptacle, the non-insertable contact makes conductive (electrically) contact through conductive pins19 (fig. 1) with a non-insertable feature 17 (fig. 1); and the insertable contact 23 and 24 accept the insertable features 23 and 24.

an IC 3 (figs 1 & 3) located on the electronic circuit package.

Coico et al. do not explicitly show the electronic circuit package and a display coupled to the electronic circuit package within an electronic system.

Although Coico et al. do not specify the electronic circuit package and a display coupled to the electronic circuit package within an electronic system. However, an electronic circuit package including electronic circuit package and

printed circuit board is well known in the microelectronic art being used in the an electronic system with a display as shown by Rumsey with device 10 (fig. 1) having integrated circuit package being coupled to the processor 12 (fig. 1; [0018]) and a display 18 (fig. 1) being coupled to the processor 12 ([0038]) . It would have been obvious to one of ordinary skill in the art at the time of the invention was made to integrate Coico et al. device into the electronic system as shown by Rumsey et al, since it has been held to be within the general skill of a worker in the art to select a known device on the basis of its suitability for the intended use.

Regarding claim **28**, Coico et al. disclose a device to apply a sustained, vertical, compressive force to increase a contact pressure between the non-insertable feature and the non- insertable contact (col. 4, lines 55 – 63 and col. 5, lines 26 - 37).

Regarding claim **29**, Coico et al. disclose a device to apply a sustained, normal force to increase a contact pressure between the insertable feature and the insertable contact (col. 4, lines 55 – 63 and col. 5, lines 26 - 37).

Regarding claim **30**, Rumsey et al. disclose the electronic system comprises a server system ([0038]).

Allowable Subject Matter

11. Claims **1 – 3, 6, 7** and **35 – 37** are allowed.

12. The following is an examiner's statement of reasons for allowance: Claims **1 – 3, 6, 7** and **35 – 37** are allowable over the prior art of record because none of

the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

Insertable feature configured to receive a horizontal force as cited in the independent claim 1; electrical interfaces on a second surface of the body of the receptacle as cited in the independent claim 35 (of set claims 35 – 37); and among other limitations as cited in the independent claims 1 and 35.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LKT

August 25, 2005

David Nelms
Supervisory Patent Examiner
Technology Center 2800